No. 7900103

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pure Seed Testing, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

KENTUCKY BLUEGRASS

'Columbia'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 29th *day of* January *in the year of our Lord one thousand nine hundred and* eighty-one.

Attest:

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
P-92	Columbia	PV NUMBER 7900103
2. KIND NAME: Kentucky bluegrass	3. GENUS AND SPECIES NAME: Poa pratensis	FILING DATE: 8-21-79 / TIME: 8:00 (A.M.) P.M.
4. FAMILY NAME (BOTANICAL): Gramineae	5. DATE OF DETERMINATION: June, 1978	FEE RECEIVED: $ 500.00 / $ 250.00 / DATE: 8-21-79 / 11/20/80
6. NAME OF APPLICANT(S): Pure Seed Testing,Inc.	7. ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*: 73 W. G. Street Box 449 Hubbard,OR 97032	8. TELEPHONE AREA CODE AND NUMBER: (503)981-7333

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Oregon	6/3/74

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:

Dr. William A. Meyer Pure-Seed Testing,Inc.

13. **CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:**

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [ ] YES [X] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?
[X] YES [ ] NO	[X] FOUNDATION [ ] REGISTERED [X] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [X] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

August 16, 1979 — (DATE)

William A. Meyer — (SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

FORM GR-470 (1-78)

AUG 21 1979

INSTRUCTIONS

GENERAL: Send an original copy of the application and exhibits, at least 2,500 viable seeds, and $500 fee ($250 filing fee and $250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

ITEM

5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.

13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.

13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.

13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.

13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.

14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)

15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.

EXHIBIT A

Origin and Breeding History of
Columbia Kentucky Bluegrass (P-92)

1. Selected from a cow pasture near Fredrick, Maryland in May, 1964 by C. Reed Funk. The farm belonged to Mrs. Rena Davis.

2. The selection was clonally propagated and established as plot TPI 62C in field "P" in June 1964. Seed was produced in June 1966 and used to establish a 60 plant progeny test in September, 1966 in rows 4418 - 4412 of field "K". During June of 1967 the progeny test was classified as containing 38 maternal type plants and 2 aberrents (95 percent apomictic).

3. Seed of P-92 was used to establish replicated plots in a bluegrass test planted in field "Q" in September 1967 as entry 95. Seed was also sent to Mr. Bill Rose of Woodburn, Oregon for seed production evaluation. It was maintained in seed yield tests from 1967 to 1975.

4. In 1975 vegetative clones of P-92 were removed from the yield trials and used to establish space plants in Quad 2 at the research farm in Hubbard, Oregon. Seed was produced in June, 1976 and used to establish a 100 plant progeny test in 1976. The results of this test also indicated a 95 percent level of apomixis. This seed was used for turf tests in Hubbard, Oregon; Camarillo, California; and New Brunswick, New Jersey.

5. Clonal propagules of P-92 were space planted for the production of breeders seed. This breeders seed was used to plant a foundation field. Certified fields have been established from the foundation seed.

6. No objectionable off-types or aberrants have been observed in the reporduction and multiplication of this variety.

EXHIBIT B.

NOVELTY STATEMENT FOR
COLUMBIA KENTUCKY BLUEGRASS (P-92)

Columbia Kentucky bluegrass most closely resembles Parade, except that it has shown:

(1) Shorter plant height (average 8 cm.) and shorter panicle length (1 cm.); (2) a different color (Royal Horticulture chart of 137A versus 139B for Parade); (3) better turf density (1581 versus 1340 tillers per square foot); (4) better resistance to Helminthosporium vagans leaf spot; (5) a darker phenol stain (between beige and brown); and (6) a glaborous leaf sheath.

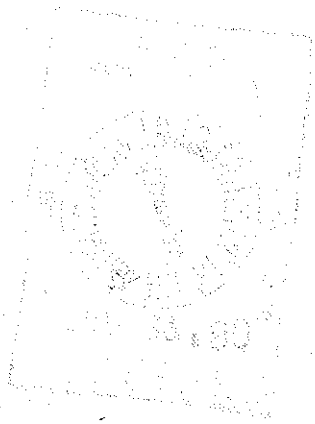

TABLE A.

MORPHOLLOGICAL MEASUREMENTS
ON KENTUCKY BLUEGRASS SPACE PLANTS
NEAR HUBBARD, OREGON DURING JUNE & JULY 1977

VARIETY	PLANT HEIGHT CM	STAN. ERROR MEAN	PANICLE LENGTH CM	STAN. ERROR MEAN	FLAG LEAF LENGHT CM	STAN. ERROR MEAN	FLAG LEAF WIDTH MM	STAN. ERROR MEAN	NUMBER PANICLES PER CLUMP	STAN. ERROR MEAN	PLANT DIAMETER CM	STAN. ERROR MEAN
ADELPHI	87.5	+-0.93	10.8	+-.22	5.2	+-.06	2.9	+-.12	167	+-9.01	53.3	+-1.27
COLUMBIA	70.2	+-1.18	8.8	+-.26	4.1	+-.13	3.4	+-.13	165	+-4.27	51.3	+-1.07
P-59	82.7	+-0.42	10.3	+-.08	4.5	+-.06	3.2	+-.13	225	+-5.59	56.8	+-0.76
PARADE	83.8	+-0.20	10.1	+-.13	4.9	+-.04	3.2	+-.06	176	+-5.63	56.0	+-0.80
SHASTA	74.9	+-0.64	11.1	+-.06	4.1	+-.08	2.8	+-.08	180	+-5.16	73.8	+-0.55
MERION	67.4	+-0.58	9.3	+-.11	5.1	+-.22	3.3	+-.08	81	+-1.40	44.5	+-0.26

TABLE B.

MORPHOLLOGICAL MEASUREMENTS
ON KENTUCKY BLUEGRASS SPACE PLANTS
NEAR HUBBARD, OREGON DURING JUNE & JULY 1978

VARIETY	PLANT HEIGHT CM	STAN. ERROR MEAN	PANICLE LENGTH CM	STAN. ERROR MEAN	FLAG LEAF LENGTH CM	STAN. ERROR MEAN	FLAG LEAF WIDTH MM	STAN. ERROR MEAN
ADELPHI	69.9	+-.83	9.6	+-.22	3.9	+-.39	2.5	+-.22
BARON	60.0	+-.93	7.9	+-.21	4.3	+-.34	2.5	+-.20
COLUMBIA	71.0	+-.79	8.7	+-.24	3.9	+-.47	2.5	+-.25
P-59	69.7	+-1.21	10.4	+-.29	5.8	+-.71	3.4	+-.27
PARADE	75.0	+-1.0	9.9	+-.39	5.0	+-.57	3.3	+-.26
SHASTA	72.9	+-.73	9.9	+-.21	4.1	+-.61	2.7	+-.31
MERION	68.4	+-.58	9.3	+-.11	5.1	+-.22	3.3	+-.08

TABLE M.--Density of Kentucky bluegrass cultivars and selections in turf trials near Hubbard, Oregon seeded September, 1977.

Test maintained at 1¼" cutting height & moderately high fertility.

Cultivars and Selections	Tillers/sq. ft.	Standard Error of Mean
Columbia	1581	+ - 135
P-59	1363	+ - 55
Baron	1375	+ - 131
Parade	1340	+ - 92
Adelphi	1615	+ - 108
Shasta	1455	+ - 79
Glade	1650	+ - 168
Bonnieblue	1466	+ - 79

7900103

FORM APPROVED. OMB NO. 40-R3712

FORM GR-470-18
(1-15-73)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
GRAIN DIVISION
HYATTSVILLE, MARYLAND 20782

EXHIBIT C
(Bluegrass)

OBJECTIVE DESCRIPTION OF VARIETY

BLUEGRASS (*POA SPP.*)

NAME OF APPLICANT(S)
Pure-Seed Testing, Inc.

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
Box 449 73 W. G. Street
Hubbard, OR 97032

FOR OFFICIAL USE ONLY
PVPO NUMBER 7900103
VARIETY NAME OR TEMPORARY DESIGNATION
COLUMBIA

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:

[2] 1 = POA COMPRESSA 2 = P. PRATENSIS 3 = P. TRIVIALIS 4 = OTHER (Specify) _____

2. REGION OF BEST ADAPTATION:

[1] 1 = NORTHEAST 2 = TRANSITIONAL ZONE 3 = NORTH CENTRAL 4 = PACIFIC N.W. 5 = OTHER (Specify) _____

3. MATURITY (At First Anthesis):

[3] 1 = EARLY (Delta) 2 = MEDIUM EARLY (Fylking) 3 = MEDIUM (Newport) 4 = LATE (Merion) See Table J

[2] NUMBER OF DAYS EARLIER THAN ..... [4]
[4] NUMBER OF DAYS LATER THAN ..... [6]

1 = NUGGET 2 = FYLKING 3 = DELTA 4 = MERION 5 = NEWPORT 6 = BARON

4. PLANT HEIGHT (Longest Shoot from Soil Surface to Top of Head):

[0][7][0] CM. HEIGHT

[ ][ ] CM. SHORTER THAN ..... [ ]
[0][3] CM. TALLER THAN ..... [4]

1 = NUGGET 2 = FYLKING 3 = DELTA 4 = MERION 5 = NEWPORT 6 = BARON

5. HABIT:

[2] 1 = PROSTRATE (Fylking) 2 = SEMI-PROSTRATE (Marion) 3 = ERECT (Delta)

6. VEGETATIVE REPRODUCTION (1 = Absent; 2 = Present):

[2] RHIZOMES [ ] STOLONS

7. LEAF BLADE:

[5] Color: 1 = LIGHT GREEN (Rough Bluegrass) 2 = BLUE GREEN (Canada Bluegrass) 3 = MODERATELY DARK GREEN (Merion) 4 = DARK GREEN (Adelphi) 5 = OTHER (Specify) 137 A Royal Horticultural Chart

[2] Upper Surface: 1 = SHINY 2 = DULL

[1] Lower Surface: 1 = SHINY 2 = DULL

[3.4] MM. WIDTH

[4][4] MM. LENGTH See Table A

8. LEAF SHEATH (Base):

[1] Seedling Color: 1 = GREEN 2 = RED [ ][ ] MM. LENGTH

[2] Keel: 1 = NOT KEELED 2 = KEELED

Surface:

[1] 1 = GLABROUS 2 = PUBESCENT [0] 1 = SMOOTH 2 = ROUGH

[ ] 1 = NON-GLAUCOUS 2 = GLAUCOUS

9. LEAFINESS (At First Anthesis):

[2] Number of leaves per tiller or shoot: 1 = FEW (1 - 3) 2 = INTERMEDIATE (4 - 6) 3 = MANY (More than 6)

10. PANICLE:

[0][8][8] MM. LENGTH See Table A and B

[ ][ ][ ] MM. LONGER THAN ..... [ ]
[0][0][5] MM. SHORTER THAN ..... [4]

1 = NUGGET 2 = FYLKING 3 = DELTA 4 = MERION 5 = NEWPORT 6 = BARON

FORM GR-470-18 (Reverse) 7900103 Columbia

10. PANICLE (Cont.):

[1][6][5] NUMBER OF PANICLES PER PLANT [9][9] MILLIGRAMS SEED PER PANICLE See Table A

[2] Branches LOWEST WHORL: 1 = DROOPING (Prato) 2 = HORIZONAL (Merion) 3 = OTHER (Specify) _____

[2] Panicle Habit: 1 = NODDING (Newport) 2 = UPRIGHT (Nugget) [ ][ ] MM. SPIKELET LENGTH

11. LEMMA

[3] KEEL
[3] LATERAL NERVES
} 1 = GLABROUS 2 = SLIGHTLY PUBESCENT 3 = PUBESCENT 4 = OTHER (Specify) _____

2 [2] Intermediate Nerves: 1 = DISTINCT 2 = OBSCURE [3] Basal Webbing: 1 = NONE 2 = SCANT 3 = COPIOUS

12. SEED:

[2] Apomictin Percentage: 1 = MORE THAN 95 2 = 85 TO 95 3 = LESS THAN 85
2 10/28/80
[1] Phenol Reaction: 1 = NONE - LEMMA REMOVED (Merion) 2 = BEIGE (Cougar) 3 = BROWN (Windsor)
4 = BLACK (Delta - 2 hours) 5 = BLACK (Anheuser - 24 hours)

[0][6][8] MM. WIDTH [2][6][4] MM. LENGTH [3][2][6] GRAMS PER 10,000 SEEDS [ ][ ] CHROMOSOME NO. (2n)

13. TURF DENSITY MAINTENANCE AT ONE INCH CUT:

[3] 1 = POOR 2 = MODERATE (Merion) 3 = SUPERIOR (Nugget) 4 = EXCELLENT Table M

14. VERTICAL GROWTH RATE:

[2] 1 = SLOW (Nugget) 2 = MEDIUM (Merion) 3 = FAST (Delta) 4 = OTHER (Specify relation to a standard) _____

15. SPRING GREEN UP:

[1] 1 = EARLY (Windsor) 2 = MEDIUM (Fylking) 3 = LATE (Nugget)

16. FALL DORMANCY: (1 = Not Dormant; 2 = Intermediate; 3 = Dormant)

[1] NORTHERN (42° 30' ± 30' Lat.) [1] INTERMEDIATE (40° ± 30' Lat.) [ ] SOUTHERN (37° 30' ± 30' Lat.)

17. SEEDLING VIGOR (Growth Rate):

[3] Seedling: 1 = SLOW 2 = MEDIUM 3 = FAST

18. ENVIRONMENTAL RESISTANCE: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[2] COOL TEMPERATURE (Winter color)	[2] COLD (Injury)	[2] HEAT	[2] DROUGHT
[2] SHADE Table N	[2] POOR FERTILITY Table G & 1	[2] ACID SOIL	[0] ALKALINITY
[0] SALINITY	[0] SOIL COMPACTION	[2] POOR DRAINAGE	[0] AIR POLLUTION
[0] OTHER (Specify)			

19. DISEASE, INSECTS, AND NEMATODE RESISTANCE: (0 = Not Tested; 1 = Susceptible; 2 = Resistant)

[2] HELMINTHOSPORIUM VAGANS Table L	[2] H. SOROKINIANUM	[0] H. DICTYOIDES	[0] RHIZOCTONIA SOLANI
[1] ERYSIPHE GRAMINIS	[2] USTILAGO STRIIFORMIS	[2] FUSARIUM NIVALE	[2] F. ROSEUM Table H & I
[0] TYPHULA IOTANA	[2] SCELEROTINIA HOMEOCARPA	[2] PUCCINIA GRAMINIA	[1.5] P. STRIIFORMIS Table K
[0] PYTHIUM ULTIMATUM	[0] CRAMBUS BONIFATELLUNS	[2] OTHER (Specify) Leaf Rust	

REFERENCE

Nickerson's or any recognized color fan may be used to determine plant colors of the described variety.

8

AUG 21 1979

EXHIBIT D

Additional Description of
Columbia Kentucky Bluegrass (P-92)

Columbia Kentucky bluegrass is a medium dark green turf-type cultivar with a medium-late maturity (Table 3). In Hubbard, Oregon tests it has shown good resistance to leaf spot (Helminthosporium vagans) and a moderate level of tolerance to stripe rust (Puccinia striiformis), (Tables J, K & L). It has rated well, with very good density, in turf trials near Hubbard, Oregon at moderately high fertility levels (Tables E, F, L & M) and better than other commercial varieties at low fertility (Table G). Columbia has good winter color retention and very good spring green up. It does get moderately stemmy in turf during late spring due to seed head formation.

In Camarillo, California turf tests it has rated better than other commercial varieties (Tables H & I). It was also found to be more resistant to Fusarium blight than other varieties.

Since 1967 stripe smut (Ustilago striiformis) has never been found to be a problem in Columbia in turf trials in New Brunswick, New Jersey. It has also performed better than many other commercial varieties in a low fertility turf trial in North Brunswick, New Jersey (Table 1).

USDA

United States Department of Agriculture

Research, Education, and Economics
Agricultural Research Service

January 7, 2000

Thomas Salt
Plant Variety Protection Office
NAL Building, Room 500
10301 Baltimore Blvd.
Beltsville, MD 20705-2351

SUBJECT: Expired PVP Applications Transferred to NPGS

Dear Thomas:

We have received notice in the Plant Variety Protection Office Official Journal Quarterly Report of the expiration of the following applications. We have transferred the control of these samples to the NPGS. We have made all necessary changes to our records.

PVP NO.	CULTIVAR	PI NUMBER	CROP	NSSL SERIAL NUMBER
7900103	Columbia	PI 600789	Bluegrass, Kentucky	NSSL 116196.01
8000079	Shasta	PI 600794	Bluegrass, Kentucky	NSSL 117037.01
7900085	RRI-105	PI 600797	Rice	NSSL 117723.01
7900118	Speight G-58	PI 552500	Tobacco	NSSL 117035.02

Thank you for notifying us of this change.

Sincerely,

Judy Grotenhuis

JUDY GROTENHUIS
Data Management Unit

ars

Northern Plains Area • National Seed Storage Laboratory
1111 South Mason Street • Ft. Collins, CO 80521-4500
Voice: 970 495-3200 • Fax: 970 221-1427